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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,371	06/27/2001	Yutaka Onozawa	1217-010927	5541

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EXAMINER

EGAN, BRIAN P

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 06/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/894,371

Applicant(s)

ONOZAWA ET AL.

Examiner

Brian P. Egan

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 05 June 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see Note below);
- (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☒ Applicant's reply has overcome the following rejection(s): See Continuation Sheet.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☐ The a) ☐ affidavit, b) ☐ exhibit, or c) ☐ request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: None.Claim(s) objected to: None.Claim(s) rejected: 1,5,8-12,16,19,20,24,27 and 28.

Claim(s) withdrawn from consideration: _____.

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____

Continuation of 3. Applicant's reply has overcome the following rejection(s): the 35 U.S.C. 103(a) rejections of claims 1, 5, 8-12, 16, 19-20, 24, and 27-28 over JP 11-309813 in view of Kawasaki et al., over JP 11-309813 in view of Welhart et al., over Russell et al. in view of Kawasaki et al., and over Hojnowski in view of Kawasaki et al. and Onozawa et al. .

ADVISORY ACTION

1. Applicant's arguments filed June 5, 2003 have been fully considered but they are not persuasive.

The Applicant's amendment, paper no. 7, has been entered but it fails to place the application in condition for allowance. The Examiner maintains several prior art rejections from the previous office action, paper no. 8.

First, with regards to the finality of the previous office action, the Examiner maintains that it was proper. The Examiner agrees that Claim 2 was only rejected in the first office action under 35 U.S.C. 112, first paragraph. It was impossible for the multilayered base to be constructed of a plurality of the same resin films laminated since the adhesive layers are also resinous thereby creating more than one type of resinous layers. Contrary to the Applicant's contentions, the limitations of the originally filed claim 2 were not per se incorporated into the amended claim 1 in paper no. 5 since the amended claim 1 also claims optional different resin layers and defines each set of resin layers as first and second resin films – the claim is not limited to a multilayered base comprising only the same resin type layers and thus the amended claim in paper no. 5 is enabling unlike the originally filed claim 2.

Second, the Applicant contends that the two amendments, i.e. the addition of the base layer thickness and the elimination of polymethyl methacrylate as a resin type, place the Application in condition for allowance. The Examiner respectfully disagrees. First, the fact that the cited prior art from the previous office action fails to teach the Applicant's claimed base layer thickness does not preclude the obvious modification of the thickness of the base layer substrate. A change in size is generally recognized as being within the level of ordinary skill in the art. *In*

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re Rose, 105 USPQ 237 (CCPA 1955). Furthermore, it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

With regards to the elimination of PMM from the group of selected resin materials, several prior art rejections have been overcome from the previous office action. These rejections include the rejections of claims 1, 5, 8-12, 16, 19-20, 24, and 27-28 over JP 11-309813 in view of Kawasaki et al., the aforementioned claim numbers over JP 11-309813 in view of Welhart et al., the aforementioned claim numbers over Russell et al. in view of Kawasaki et al., and the aforementioned claim numbers over Hojnowski in view of Kawasaki et al. and Onozawa et al. These rejections fail to anticipate or fairly suggest the Applicant's claimed invention wherein either the multiple first or second resin films are selected from styrene-based resins or polycarbonate resins and instead teach the use of multiple layers of polymethyl methacrylate resins. The Examiner maintains, however, the rejection of claims 1, 5, 8-12, 16, 19-20, 24, and 27-28 over Russell et al. in view of Welhart et al., and the rejection of the aforementioned claim numbers over Hojnowski in view of Welhart et al. and Onozawa et al.

As detailed in the previous office action:

Russell et al. teach a hard coat film comprising a silicone-based hard coat layer (Col. 36, lines 16-26) provided on one side of a multi-layered base composed of a plurality of resin films (see Figs. 3(c and e), denoted "S"). The hard coat layer is provided on the weather-resistant resin film wherein the weather-resistant resin film comprises an ultraviolet absorber (Col. 18, lines 18-23). A release sheet is provided via an adhesive layer on a side made of the multi-layered base opposite to a side provided with the silicone-based hard coat layer (Col. 28, lines 62-66). The hard coat film is stuck on external surfaces of window panes and plastic boards for windows (Col. 34, lines 62-66). Note, however, that the claimed limitation, "the hard coat film used for being stuck on the external surfaces..." is merely an intended use. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Marsham*, 2 USPQ 2d 1647 (1987).

Although Russell et al. teach that the substrate layers are selected from multiple different materials, it is unclear whether the embodiments wherein there are multiple substrates (figs. 3(a-e), 4(c-f); Col. 17, line 40 to Col. 18, line 17) comprise the same or different materials. Therefore, Russell et al. fails to explicitly teach more than one layer of the same resinous material as well as a second resinous layer comprising a specific impact strength. Note, however, that the second layer as claimed by the Applicant is not a positive limitation (i.e. "optional" language is

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used) and therefore given no patentable weight. Prior art need not teach the "optional" second layer to establish a *prima facie* case of obviousness under 35 U.S.C. 103(a).

Welhart et al. teach the use of a multilayered transparent laminate comprising a polycarbonate resin film layer surrounded by two layers of polymethyl methacrylate resin (Col. 3, lines 17-20). Welhart et al. teach that the polycarbonate layer thickness is modified to withstand the forces applied to the desired end product and explicitly teach that the polycarbonate withstands pressures of greater than 8 psi (Col. 6, lines 40-52). Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified the thickness of the polycarbonate layer such that it withstands the pressures applied to the desired end product. Furthermore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified the thickness of the polycarbonate layer such that it exhibits an impact strength within the Applicant's claimed range (i.e., greater than 10 kg cm/cm²) since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Welhart et al. teach the use of the multilayered film for the purpose of replacing the use of either a single polycarbonate film layer or a single polymethyl methacrylate film layer such that the multilayered structure achieves the advantages of both acrylic and polycarbonate including weatherability and impact resistance (see Columns 1-2). Thus, it would have been obvious through routine experimentation to one of ordinary skill in the art at the time Applicant's invention was made to have modified a single-layered base layer structure of either polycarbonate or polymethyl methacrylate with a multilayered structure comprising two layers of PMM and an intermediate layer of polycarbonate for the purpose of replacing the use of either a single polycarbonate film layer or a single polymethyl methacrylate film layer such that the multilayered structure achieves the advantages of both acrylic and polycarbonate including weatherability and impact resistance as taught by Welhart et al.

Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified Russell et al. by replacing the single layered base "S" with a multilayered film of PMM and polycarbonate as taught by Welhart et al. in order to replace the use of either a single polycarbonate film layer or a single polymethyl methacrylate film layer such that the multilayered structure achieves the advantages of both acrylic and polycarbonate including weatherability and impact resistance.

Despite the Applicant's contentions, the Examiner posits that it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified the thickness of the base layer substrate of both Russell et al. and Welhart et al. Furthermore, given that Russell et al. teach the use of multiple "S" substrates, modifying each "S" substrate with the multilayered base film of Welhart et al. would produce an end product comprising multiple first resin films of polycarbonate (2 layers) and multiple second resin layers (4 polymethyl methacrylate layers). As noted above, it would have been obvious to make such a combination in order to replace the use of either a single polycarbonate or single PMM film layer such that the multilayered structure achieves the advantages of both PMM and polycarbonate including weatherability and impact resistance.

As further detailed in the previous office action:

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Hojnowski teach a substrate comprising a hard coat film layer provided on one side of a plurality of resin film laminates (see Abstract; Fig. 1). The multilayered based comprises an impact resistant resin film (Fig. 1, #10; Col. 5, lines 44-52) and a second protective polymeric resin layer that is "weatherable" (Fig. 1, #16). The hard coat layer is provided on the protective polymeric resin layer of the multi-layered base (Fig. 1, #18). The polymeric resin film further comprises ultraviolet absorbers (Col. 5, lines 57-58; Col. 6, lines 40-41). The substrate comprises an adhesive layer on the opposite side of the multilayered base than the hard coat film such that the substrate is able to be affixed to surfaces such as window panes or plastic boards for windows (Col. 5, lines 20-23). Note, however, that the claimed limitation, "the hard coat film used for being stuck on the external surfaces..." is merely an intended use. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Marsham*, 2 USPQ 2d 1647 (1987).

Although Hojnowski does not explicitly state that the hard-coat film layer is silicon-containing, Hojnowski states that, "the scratch and abrasion resistant hard coat (18) may be selected from any of a number of hard coat materials conventionally employed and well known in the window film industry (Col. 6, lines 42-46)." It is notoriously well known in the art to use silicon-containing hard coat films in the window film industry as evidenced by Onozawa et al. (see Abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time applicants invention was made to have used a silicone-containing hardcoat film on the substrate detailed by Hojnowski since silicone-containing hardcoat films are notoriously well known in the art and exhibit excellent hard coat properties while also exhibiting anti-fouling, anti-bacterial, and anti-glare properties as evidenced by Onozawa et al. (see Abstract).

Hojnowski fails to teach the use of more than one of the same resin layers along with a second resin layer wherein one of the resins is weather-resistant and the other resistant has a specific impact strength. Note, however, that the second layer as claimed by the Applicant is not a positive limitation (i.e. "optional" language is used) and therefore given no patentable weight. Prior art need not teach the "optional" second layer to establish a *prima facie* case of obviousness under 35 U.S.C. 103(a). Hojnowski also fails to teach a release liner affixed to the adhesive layer.

Welhart et al. teach the use of a multilayered transparent laminate comprising a polycarbonate resin film layer surrounded by two layers of polymethyl methacrylate resin (Col. 3, lines 17-20). Welhart et al. teach that the polycarbonate layer thickness is modified to withstand the forces applied to the desired end product and explicitly teach that the polycarbonate withstands pressures of greater than 8 psi (Col. 6, lines 40-52). Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified the thickness of the polycarbonate layer such that it withstands the pressures applied to the desired end product. Furthermore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified the thickness of the polycarbonate layer such that it exhibits an impact strength within the Applicant's claimed range (i.e., greater than 10 kg cm/cm²) since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Welhart et al. teach the use of the multilayered film for the purpose of replacing the use of either a single polycarbonate film layer or a single polymethyl methacrylate film layer such that the multilayered structure achieves the advantages of both acrylic and polycarbonate including weatherability and impact resistance (see Columns 1-2). Thus, it would have been obvious through routine experimentation to one of ordinary skill in the art at the time Applicant's invention was made to have modified a single-layered base layer structure of either polycarbonate or polymethyl methacrylate with a multilayered structure comprising two layers of PMM and an intermediate layer of polycarbonate for the purpose of replacing the use of either a single polycarbonate film layer or a single polymethyl methacrylate film layer such that the multilayered structure achieves the advantages of both acrylic and polycarbonate including weatherability and impact resistance as taught by Welhart et al.

Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified Hojnowski by replacing either or both of layers #10 and #16 (from Fig. 1) with a multilayered film of PMM and polycarbonate as taught by Welhart et al. in order to replace the use of either a weather-resistant or an impact-resistant film layer such that the multilayered structure achieves the advantages of both acrylic and polycarbonate including weatherability and impact resistance.

Onozawa et al. teach a hard coat sheet laminated to a base wherein the base comprises an adhesive layer and a release liner on the opposite side of the base from the hard coat layer (Col. 3, line 63 to Col. 4, line 2). Onozawa et al. teach the use of a release liner for the purpose of protecting the adhesive surface prior to affixing the substrate to

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the desired end product (Col. 4, lines 36-38). It would have been obvious through routine experimentation to one of ordinary skill in the art at the time applicants invention was made to have provided an adhesive layer on the back of a window film substrate with a release liner for the purpose of protecting the adhesive prior to affixing the window film to the desired end product as taught by Onozawa et al.

Therefore, it would have been obvious to one of ordinary skill in the art to modify Hojnowski by providing the adhesive layer with a release liner as taught by Onozawa et al. in order to protect the adhesive prior to affixing the film to the desired end product.

Despite the Applicant's contentions, the Examiner posits that it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified the thickness of the base layer substrate of both Hojnowski and Welhart et al. It is further noted that Hojnowski teaches that both layers 10 and 16 (see Fig. 1) may be polycarbonate (Col. 5, lines 44-52-58). Therefore, even in the absence of a secondary prior art reference, Hojnowski teaches multiple first resin films of polycarbonate and thus and thus anticipates the material composition of the Applicant's claimed invention since the second resin layer is only optional. Furthermore, modifying both resin layers 10 and 16 of Hojnowski with the multilayered base film of Welhart et al. would produce an end product comprising multiple first resin films of polycarbonate (2 layers) and multiple second resin layers (4 polymethyl methacrylate layers). As noted above, it would have been obvious to make such a combination in order to replace the use of either a single polycarbonate or single PMM film layer such that the multilayered structure achieves the advantages of both PMM and polycarbonate including weatherability and impact resistance. Finally, with regards to the Applicant's contentions that Onozawa et al. fails to provide a multilayered base substrate and thus Onozawa et al. does not provide motivation for modifying Hojnowski, the Examiner respectfully disagrees. The Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. *In re Nomiya*, 184 USPQ 607 (CCPA 1975). However, there is no requirement that

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a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. *In re McLaughlin*, 170 USPQ 209 (CCPA 1971). References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. *In re Bozek*, 163 USPQ 545 (CCPA 1969). In this case, taking the teachings of both Hojnowski and Onozawa et al. as a whole, it would have been obvious to one of ordinary skill in the art to provide Hojnowski with a release liner to protect the adhesive prior to applying the substrate to the desired end product. Furthermore, it would have been obvious to provide a silicone based hard coat layer as taught by Onozawa et al. to provide a hard coat layer that exhibits excellent hard coat properties while also exhibiting anti-fouling, anti-bacterial, and anti-glare properties – whether or not Onozawa et al. teach a multilayered base substrate does not preclude making such obvious modifications to the teachings of Hojnowski. The Examiner therefore maintains the aforementioned rejection from the previous office action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian P. Egan whose telephone number is 703-305-3144. The examiner can normally be reached on M-F, 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 703-308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.


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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


BPE
June 17, 2003


HAROLD PYON
SUPERVISORY PATENT EXAMINER
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